



# GEMS NEWSLETTER



Volume 1, Issue 1

May, 2001

## Inaugural Issue

*GEMS at a Glance*

The Waste Management Program has initiated this newsletter to better communicate with those submitting environmental monitoring data to us. The newsletter will discuss issues, improvements, and changes to GEMS that have an impact on how environmental monitoring data is submitted. Future newsletters may address broader environmental monitoring issues.

GEMS is an acronym for the Groundwater and Environmental Monitoring System, an extensive database that contains environmental monitoring data from over six hundred facilities across the state. When a facility submits data electronically or on paper TADs, to the Waste Management Program, that data is uploaded to GEMS where it is sorted by license number and DNR point ID. GEMS also has the capability to produce a vast array of reports that allow staff members to more efficiently evaluate the data we receive for any given facility.

There are two ways that environmental monitoring data gets  
*continued on page 2*

## Alternative Electronic Submittal Format

*Comma-Delimited Files*

As part of our commitment to making data reporting more efficient, we have developed a new comma-delimited format for electronic submittal of data. It is our hope that the comma-delimited format will allow facilities that do not currently submit data electronically to do so. Another purpose of this format is to provide facilities already submitting data electronically with greater flexibility in the way they prepare their submittals. A comma-delimited file can be created in a program such as Microsoft Excel. We have developed a template Excel worksheet, available on our website, that has preset formatting to accommodate our data reporting requirements. If you as a facility, consultant, or lab, would like to explore the possibility of submitting data in a comma-delimited format contact Dennis Zuniga at (608) 267-0546 or visit our website at [www.dnr.state.wi.us/org/aw/wm/monitor/downloads/index.htm](http://www.dnr.state.wi.us/org/aw/wm/monitor/downloads/index.htm) ❖

### INSIDE THIS ISSUE

<b>2</b>	<b><i>Who do I ask about...</i></b>
<b>2</b>	<b><i>Lab Certification Checks are here</i></b>
<b>3</b>	<b><i>Reporting Results for Gas Samples</i></b>
<b>3</b>	<b><i>Submittal of Gas &amp; Leachate Data</i></b>
<b>3</b>	<b><i>Monitoring Well Information Pilot</i></b>
<b>4</b>	<b><i>Common Problems with Data Submittals</i></b>

## Paper TADs are being phased out!

We have required the submittal of environmental monitoring data electronically since passage of the revised Solid Waste Management Rules (NR 500 Series) on July 1, 1996. While writing the rules in 1996, we included a provision allowing landfill owners of small sites with few wells to continue submitting paper forms because of the financial burden that submitting data electronically might cause. However, since that time many laboratories have developed the capability of producing the data in the format required by our program at a nominal additional charge.

*continued on page 3*



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**GEMS Newsletter 1**



***“Inaugural Issue” continued from page 1***

from the facility to GEMS. The majority of facilities submit their data to us electronically, while some smaller facilities are allowed to submit data using paper TADs. We discourage the use of paper TADs because of possible data-entry errors and the inadequate reporting of some required information, such as QA/QC flags.

Currently, we require that all electronic data submittals be in the format outlined in a letter sent to facilities with the subject, “New Requirements for Reporting Environmental Monitoring Results,” dated July 30, 1996. However, we have developed an alternative format that may be used by

## **WHO DO I ASK ABOUT...**

### **the phasing out of paper TADS?**

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### **parameter codes?**

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### **electronic data submittals?**

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### **upload status?**

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### **reporting periods?**

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### **information requests?**

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facilities that submit data via paper TADs or facilities that are having problems with the present electronic format. The alternative format is discussed in further detail in the section titled “Alternative Electronic Submittal Format.” (Page 1)

We are aware that facilities, labs, consultants, and our staff spend a lot of time trying to resolve formatting issues with regard to electronic data submittals. In fact, an overwhelming majority of returned submittals are due to formatting issues alone. Consequently, we are streamlining our upload process so that we can correct obvious problems, such as incorrect dates, that have no impact on the result values submitted. For legal reasons, any corrections we make to the data submittal must be acknowledged by the facility or a facility representative. As a result, we spend a significant amount of time communicating with facilities to resolve these issues.

We in the Waste Management Program hope that this newsletter, our website, and staff can continue to improve the lines of communication between the regulated community and us for the mutual benefit of all. Any suggestions or improvements you may have regarding the way we collect data are welcome. You can email us at ([gems@dnr.state.wi.us](mailto:gems@dnr.state.wi.us)). Any emails we receive will be reviewed on a regular basis. ❖

## **Lab Certification Checks are here**

The Waste Management Program now has the ability to quickly check whether facilities are submitting analyses conducted by laboratories that are certified for the appropriate test categories. NR 507.17(5), Wis. Adm. Code, requires that chemical analyses submitted to the Waste Management Program be conducted by a laboratory with appropriate certifications. We will accept monitoring data only if they are analyzed in a laboratory that has the appropriate certifications. As facilities negotiate future sampling contracts with labs, they can go to the DNR website and find lists of laboratories and the certifications for each. The certified lab list can be downloaded from [www.dnr.state.wi.us/org/es/science/lc/search](http://www.dnr.state.wi.us/org/es/science/lc/search) and viewed using Adobe Acrobat. Once downloaded, the facility can search the list for potential suppliers of lab services and verify that they are certified to conduct the analyses required of the facility. ❖

## ***“Paper TADS” continued from page 1***

The 1996 rule also requires that the limit of detection, limit of quantitation, analytical method, and quality control flags be submitted for each parameter with each set of lab-analyzed results. This QA/QC information is essential for interpreting the sampling results.

Facilities who submit data on paper Turnaround Documents (TADs) are not meeting those requirements. In the near future, we will be requiring that facilities submit quality assurance/quality control (QA/QC) information regardless of reporting media. The QA/QC information must be submitted electronically. If you currently submit data electronically, you already meet those requirements. However, the facilities that are still submitting data on paper TADs will need to submit the QA/QC information electronically. Our staff is very happy to guide facilities through the steps needed to submit monitoring data electronically. If you believe you cannot submit all of your data electronically, you can contact us to discuss other arrangements.

If you have any questions about how to submit your environmental monitoring data electronically, please contact Dennis Zuniga. (See “Who Do I Ask About...” on Page 2) ❖

## **Reporting Results for Gas Samples**

We have added GEMS parameter codes for substances detected in air or gas samples. These include 81 volatile organic compounds (VOCs), carbon monoxide, and nitrogen. The new VOC parameters are to be reported with the units of nL/L, which is equivalent to ppb v/v. Carbon monoxide and nitrogen should be reported with units of  $\mu$ L/L, which is equivalent to ppm v/v. If you are reporting the results of an analysis of a gas or air sample that includes more parameters than methane and oxygen, please use the new parameter codes for substances in air. These parameter codes are included in the Waste Management Program’s parameter table, which is available on the web at:

[www.dnr.state.wi.us/org/aw/wm/monitor/downloads/index.htm](http://www.dnr.state.wi.us/org/aw/wm/monitor/downloads/index.htm). ❖



### **GEMS Newsletter Staff**

**Dennis Zuniga – Editor**

**Janet Battista – Co-editor**

## **Submittal of Gas and Leachate Data**

We are beginning to contact facilities that are not submitting their engineering-related data electronically. Rules established in 1996 require facilities to submit all monitoring data electronically, including engineering data, such as leachate volume, leachate quality, gas volume, and percent methane. Many facilities submit groundwater data electronically, but submit their engineering data in hard copy, either along with a disk containing their laboratory data, or in an annual report.

Our staff are ready to help you submit engineering data electronically. Please contact Dennis Zuniga about how to do this. (See “Who Do I Ask About...” on Page 2) ❖

## **Monitoring Well Information Pilot**

We are planning to require facilities and consultants to begin submitting monitoring well construction and development information electronically. We are also setting up a pilot project for facilities and consultants that are interested in electronic submittal of monitoring well construction information. The goal of the pilot is to obtain feedback on the electronic submittal process.

There are two methods we are exploring for submitting these data electronically. One option is to use the electronic forms that are available on the Environmental Monitoring website at:

[www.dnr.state.wi.us/org/aw/wm/monitor/downloads/index.htm](http://www.dnr.state.wi.us/org/aw/wm/monitor/downloads/index.htm).

Another option is to submit the data in a comma-delimited file created from a spreadsheet, similar to the way environmental monitoring data is submitted.

Currently, facilities submit well construction information to the Department on two paper forms: the Monitoring Well Construction Form 4400-113A and Monitoring Well Development Form 4400-113B. Until further notice, we will continue to require a paper copy of the forms in addition to the electronic submittal.

If you are interested in the pilot, have comments, or are concerned about the impact this would have on your firm, contact Dennis Zuniga at (608) 267-0546 or email him at ([zunigd@dnr.state.wi.us](mailto:zunigd@dnr.state.wi.us)). ❖

# Common Problems with Data Submittals

Most of the facilities, consultants, and laboratories that report data electronically to the Waste Management Program have done an excellent job reporting the data accurately. The list below contains some areas of concern or misunderstanding. An improved version of our reporting instructions is posted on the Waste Management Program's website at:

[www.dnr.state.wi.us/org/aw/wm/monitor/downloads/index.htm](http://www.dnr.state.wi.us/org/aw/wm/monitor/downloads/index.htm)

## Parameter Codes

An updated parameter table can be found on the Waste Management Program's website. The table lists parameters by parameter code, name, abbreviation, and CAS number. Be sure to note the date the file was last modified as changes to the parameter table occur often.

## Result Value

Do not use the symbols ">" or "<." Use the symbols "+" or "-" to indicate a rising or falling barometric pressure trend. (Parameter Code 46381)

## Result Qualifiers

Report an "N" in column 42 if an analyte is not detected. Report a J-flag in column 42 if a result value is equal to

or above the LOD, and less than the LOQ. If a result value is equal to the LOQ, it should not be J-flagged.

## Comments

"Comments" refer to the color, odor and turbidity of a sample, and the well conditions: broken, dry, or frozen. Sampling staff should report these conditions, if present, with the appropriate parameter code, and with a "0" in the result field. If the staff do not observe one of the field conditions, report an N in the result qualifier. The parameter codes for field conditions are listed on the Waste Management Program's website.

## Significant Figures

Laboratory results should be reported with significant figures only. Do not zero-fill the result field, LOD, LOQ, or the reporting limit fields.

## Reporting Period Date

The reporting period date is the first day of the month a sample is required to be collected. Some monitoring information, such as leachate volumes and gas data are collected monthly but reported less frequently, such as semi-annually. In these cases, the first day of the month required for each sample should be reported. ❖

**\*\* Subsequent issues of this newsletter will be distributed via email only. If you would like to receive future issues, please send your email address to [zunigd@dnr.state.wi.us](mailto:zunigd@dnr.state.wi.us) if you haven't already done so. \*\***

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Address Correction Requested

